REMARKS/ARGUMENTS

The claims are 1-15 and 17-29. Claim 1 has been amended to incorporate the subject matter of claim 16. Accordingly, claim 16 has been canceled. Reconsideration is expressly requested.

Claims 1, 2, 4, 6 and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by *Braithwaite et al., U.S. Patent No. 6,299,306*. The remaining claims were rejected under 35 U.S.C. §103(a) as being unpatentable over *Braithwaite et al.* alone (claims 3 and 9), or in view of *Heffelfinger et al., U.S. Patent No. 5,591,981* (claims 5, 17-19 and 21-22), *Heffelfinger et al. and Nagano et al, U.S. Patent Application Publication No. 2002/0164069* (claim 20), *Matsumoto, U.S. Patent No. 6,585,374* (claims 7 and 15), *Matsumoto* and *Nagano et al.* (claim 16), *Tokorotani, U.S. Patent No. 7,092,556* (claims 10-14), *Collot et al., U.S. Patent No. 5,042,073* (claims 23 and 24), or *Harkin, U.S. Patent No. 6,327,376* (claims 25-29).

Essentially, the Examiner's position was that *Braithwaite et al.* discloses the device recited in the claims, except for features which were considered within the skill of the art or taught by the secondary references. *Heffelfinger et al., Nagano et al., Matsumoto, Tokorotani, Collot et al.* and *Harkin*.

In response, Applicant has amended claim 1 to incorporate the subject matter of claim 16, thereby obviating the references to *Heffelfinger et al.*, *Tokorotani*, *Collot et al.* and *Harkin,* and respectfully traverses the Examiner's rejection for the following reasons.

As set forth in claim 1, as amended, Applicant's invention provides a device for contactless optical acquisition of biometric characteristics of a body part. The device includes a housing; an acquisition chamber disposed in the housing; an object plane extending approximately horizontally in the acquisition chamber; a positioning assistance device which generates directions to assist in positioning of a surface of the body part to be imaged in the object plane, and at least one camera, which acquires a surface image of the body part from one direction.

The at least one camera includes a lens system and an image sensor. The lens system provides substantially distortion-free imaging in an entire image field, and has a depth of field corresponding to at least a maximum topographic extension of the surface of the body part to be imaged. The at least one camera acquires a plurality of shots of a surface image at different exposures, with the plurality of shots being acquired and evaluated together.

In this way, Applicant's invention provides a device in which a camera can acquire several shots of the same surface image so that subsequently, if the quality of the shots varies, the best shot or the best shots from a series of shots can be evaluated. If individual shots are of inadequate quality, the user need not repeat the acquisition procedure. Moreover, by acquiring and evaluating together several shots of the same surface image at different exposures, limitations of the camera's contrast resolution are overcome in that, with different exposures, an overall contrast is achieved in each image area which makes it possible to evaluate the biometric characteristics.

More specifically, with an electronic camera only a limited-contrast scope of an object can be resolved. If, in the case of a contrast-rich object, the exposure of the object is optimally selected for gray regions, details in the gray regions are detected in a clearly differentiated manner, while lighter regions of the object appear only as uniformly white, and darker regions of the object appear only as uniformly black. Details such as finger lines of a finger or hand lines of a hand can then not be recognized in the lighter and darker regions.

If the same object is photographs with different exposures, details in the lighter or darker regions, in each instance, which only appeared uniformly white or black before, can also be detected. A series of pictures that were taken at different exposures can supplement one another, so that a complete image of details of the entire object is possible by means of a common evaluation of this series of pictures. By deleting the over-exposed or under-exposed regions of the pictures, only those regions that show details that can be differentiated are stored in memory as a common image.

The primary reference to *Braithwaite et al.* fails to disclose or suggest a device for contactless optical acquisition of biometric characteristics of a body part, including at least one camera which acquires a plurality of shots of a surface image at different exposures, with the plurality of shots being acquired and evaluated together. Although the secondary reference to *Matsumoto* discloses obtaining a plurality of images with different directions, there is no disclosure or suggestion in *Matsumoto* of acquiring a plurality of shots of a surface image at different exposures, as recited in Applicant's claim 1, as amended. Although a common evaluation of pictures can lead to better recording of a spatially-shaped object, the problem of being able to represent a contrast-rich object in all of its details cannot be solved even if *Braithwaite et al.* and *Matsumoto* were combined as suggested by the Examiner.

This solution is also not disclosed in *Nagano et al.* which, based on Applicant's understanding, involves cross-linking layers in a liquid resin by means of beaming in light in order to obtain a three-dimensional body. With *Nagano et al.*'s system, the light intensity of the beam to which the liquid resin is exposed is changed which, it is respectfully submitted, has nothing to do with a different exposure of a contrast-rich object for the representation of a less contrast-rich image, by means of an electronic camera. Accordingly, it is respectfully submitted even if *Braithwaite et al.* were combined with *Matsumoto* and *Nagano et al.* as suggested by the Examiner, one would still not achieve Applicant's device as recited in claim 1, as amended, in which at least one camera acquires a plurality of shots of a surface image at different exposures with the plurality of shots being acquired and evaluated together to obtain a complete image of details of a contrast-rich object.

The remaining references to *Heffelfinger et al.*, *Tokorotani*, *Collot et al.* and *Harkin* have been considered, but are believed to be no more relevant. None of these references discloses or suggests a device for optical acquisition of biometric characteristics of a body part, including at least one camera which acquires a plurality of shots of a surface image at different exposures, with the plurality of shots being acquired and evaluated together.

Accordingly, it is respectfully submitted that claim 1, as amended, together with claims 2-15 and 17-29, which depend directly or indirectly thereon, are patentable over the cited references.

In summary, claim 1 has been amended, and claim 16 has been canceled. In view of the foregoing, it is respectfully requested that the claims be allowed and that this application be passed to issue.

Respectfully submitted,
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Enclosure(s): Copy of Petition for Extension of Time

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 7, 2007.

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